GRENDEL INC.
P.O BOX 908
ROCKLEDGE, FL 32955
USA

MADE IN U.S.A.

GRENDEL P-10 Pistol

OWNER'S MANUAL

SAFETY

To achieve highest operator safety, combined with ease of handling, the P-10 has no manual safety and the hammer is never cocked. Very much like a hammerless revolver.

The hammer is of a novel design. Compared to a conventional hammer, the P-10's is extremely light and consequetly, operates at very high velocities. It is driven directly by a special powerspring on the same axis. Furthermore, the hammer's mass is concentrated around its axis giving an inertia in the critical direction of the firing pin close to zero.

The velocities necessary to fire a cartridge with the low mass hammer/firing system are so high that they cannot even be approached by the slide's action or an accidental fall. A direct blow to the hammer is impossible, as it is enclosed by the slide and grip.

The hammer's engery is transmitted to the primer through a proportionally light weight firing pin.

MALFUNCTIONING

Proper function of your P-10 is directly related to maintenance and care, and to the ammunition you use. Some of the more common types of malfunctions which may occur are as follows:

- MISFIRE: failure of the cartridge to ignite when the hammer falls.

If this occurs, pull the trigger again. If this doesn't help, keep firearm pointed in safe direction, wait 15 seconds, operate the slide manually and continue shooting.

*The most common cause of misfire is faulty ammunition.

- FAILURE TO FEED: this occurs when a cartridge has been fed from a magazine but not fully chambered.

If this occurs, keep the firearm pointed in safe direction, remove that cartridge, operate the slide manually and continue shooting.

*The most common cause for this is dirt or foreign objects impeding the magazine follower. Improperly crimped cartridges are another main cause.

- FAILURE TO EJECT 0R EXTRACT: a fired case is not fully extracted from the chamber or ejected from the P-10.

Again, keep the firearm pointed in a safe direction, clear the gun by operating the slide, remove the case and continue.

*The most common causes are a damaged extractor, ejector, or dirt. Improperly loaded or sized cartridges can cause this also.

If any of the above problems are not solved by cleaning or by use of other brands of ammuntion, stop firing, unload, and return the P-10 to our Service Department.

ACCESSORIES

Grip Extension

To improve accuracy at the cost of concealability, a grip extension is available. The extension is attached to the grip of the P-10 by a single #8 Allen screw; fitting the threaded hole at the bottom of the grip. Do not over-tighten!

Threaded barrel with muzzle brake

Also available is a 3 1/2" barrel with muzzle brake for improved rapid fire and higher muzzle velocity. The muzzle brake can be unscrewed for disassembly of your P-10. A small modification of the slide is necessary, and can easily be made by the customer at home, or free of charge if sent to GRENDEL INC. SERVICE DEPT.

Speedloader

A speedloader utilizing standard 10 round M-16 stripper clips is also available. The speedloader also works as a disassembly tool.

-Pull back the slide of your empty P-10.

-Seat the speedloader over the slide in the two forward grip grooves.

-Insert a loaded clip into the speed loader. The clip should almost reach the magazine lips.

-Press down the cartridges with your right thumb.

-Remove the speedloader with clip.

-Release the slide stop.

Target Designator

A holder also functioning as a switch for the Mini-Mag Lite[tm]*, can be attached to the grip extension to provide illumination in poor light conditions. Our MMH target designator is also available for other handguns.

*Not supplied

-Attach the assembly to your P-10.

-Screw on a Mini-Mag Lite[tm] on your designator.

-When attaching the designator to your P-10, leave the screw in the detached grip extension.

-Fasten your target designator to the grip extension with the two Allen screws. Do not over-tighten, as this can cause damage to your designator.

-Press the designator trigger to activate the flashlight. Now turn the head to a concentrated beam. When the designator trigger is released, the light goes out.

-Always check your light pattern with your sights after disassembly, battery or bulb change.

DISASSEMBLY

Unload your P-10. Pull the slide back to about 1/4" from it's rear position. The assembly holes in the lower front part of the slide will then line up with the barrel pin.

Use a pin, nail or punch less than 1/8", or the speed loader, to push out the barrel pin.

The slide can now be pulled off the frame forwards.

Remove the recoilspring from the slide, and take out the barrel. No further disassembly is necessary.

ASSEMBLY

Make certain that the barrel and recoilspring are well centered, when putting them back in the slide.

Push the slide onto the frame and back until the assembly holes line up and insert the barrel pin. Make sure the barrel is engaged too.

Work the slide a few times to check the action. Do not dry fire your P-10. As with any gun, dry fire should be avoided. The P-10's high velocity hammer mechanisms could wear prematurely if fired without ammuntion.

INSTRUCTIONS FOR USE

TO LOAD, pull the slide back so it is caught by the slide stop.

Insert one round at a time straight down through the ejector opening in the slide. Use the thumb of your right hand to press them down. It is easier to use one cartridge to press down the one ahead. When 10 rounds have been loaded, release the slide stop to let the slide slam forward to chamber a round

The P-10 can also be loaded using 10 round stripper clips with our special SpeedLoader.

When loading an 11th round, press it down halfway through the magazine lips. Carefully let the slide forward about a 1/4" to pass the 10th round, and then let the slide go forward.

TO UNLOAD, operate the slide manually until the gun is empty.

CASE A

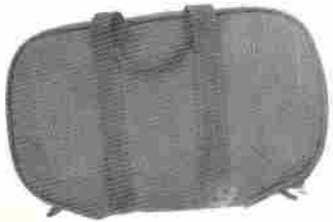
Case A is the smallest and holds only the P-10.

CASE B

Case B holds the P-10 with grip extension, speed loader and a couple of loaded clips.

CASE C

Case C is of a rectangular shape and holds the P-10 with attached target designator and light, as well as spare ammo. All cases are zippered padded gun cases with the Grendel logo.



SERVICE

Should your P-10 require adjustment, refinishing, or repair, it should be returned to the factory, unloaded. In shipping the P-10, be sure to adhere to the following rules :

- Only Federally licensed dealers may mail handguns. Individuals who mail handguns through the US Post Office, are subject to confiscation.

- Individuals who wish to return the handguns for service, can do so by shipping via UPS prepaid.

- Include a letter of instruction, full name, address, phone number, and the gun's serial number. This will insure prompt service and handling.

Once your P-10 has been received, anything other than warranty work, will receive a quotation. You will be notified of full charges, and no work will commence before receiving your approval of our quotation.

WARRANTY CLAIM INFORMATION

When returning this product for warranty service, please follow the simple rules outlined on card. Pack the P-10 properly, and make sure to enclose a letter of instruction. For Non-warranty service, we will quote a price before work begins, and all quotations are payable by COD cash or money orders only. No personal checks accepted. Please return P-10 to: **Grendel Inc. 550 St. Johns St. Cocoa, FL 32922**

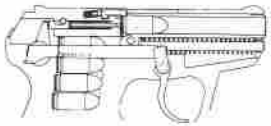
ITEMS AVAILABLE

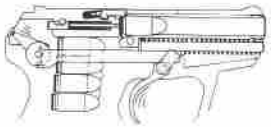
Part#	Part
MMH-010	Target Designator
P10-045	Grip Extension
P10-043	Speed Loader
P10-011	Threaded Barrel with Muzzle Brake
P10-A	Case A
P10-B	Case B
P10-C	Case C

See manual for individual descriptions

FUNCTIONING

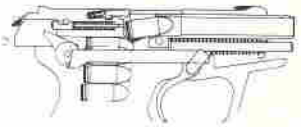
When the trigger is pulled, the trigger lever is rotated forward, together with the trigger bar, which engages the hammer catch. After about 70° rotation, the trigger bar disengages and the hammer rotates forward to strike the firing pin. The ignited powder gas drives the bullet forward through the barrel, and simultaneously the slide backwards.





On it's way back, the slide is gradually slowed down by the recoil spring. Close to the rear position, the empty case hits the ejector, and is thrown out of the gun.

The recoilspring drives the slide forward again. The top cartridge in the magazine is picked up by the breechface and pushed into the barrel.



During the complete recoil motion, the hammer is fully disengaged and follows the slide acting like an extra recoilspring. When the trigger is released, the trigger bar moves backwards and behind the hammer catch. The P-10 is then ready for another shot.

If the slide is not in battery, a disconnector cam on the trigger bar prevents firing. After the last shot in the magazine, the slide stop halts the slide in the rear position for reloading.

CONSTRUCTION

The P-10 has five main component groups; barrel, slide, frame, grip and firing mechanism.

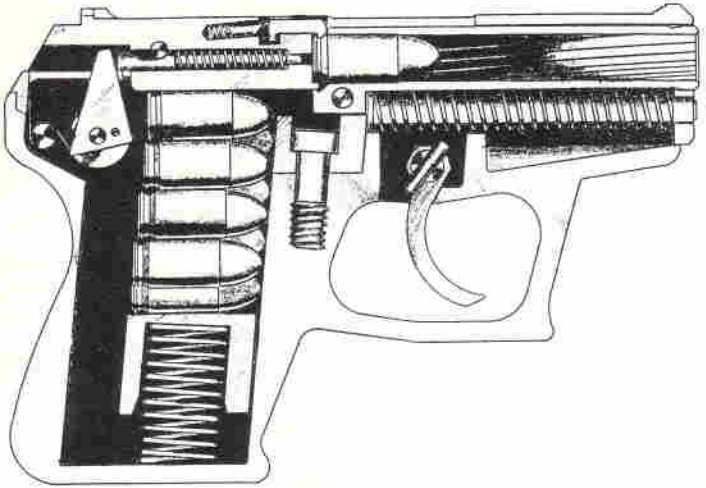
The barrel is turned and milled from SAE 4140 ordnance steel with a tensile strength of over 140,000 pounds per square inch. The bore is of standard SAAMI dimensions.

The slide is milled from solid stock of La Salle Stressproof^{tm} steel, and contains the firing pin and extractor.

The frame is an all steel construction which holds the barrel, firing mechanism, and also forms the magazine lips, slide rails, and ejector. The frame is stamped with the serial number.

The grip is made of a polymer metal composite, creating a unique combination of rigidity and impact strength. The grip also forms the magazine and triggerguard. It attaches to the frame with screws. The metal inserts in the grip also facilitate X-ray detection.

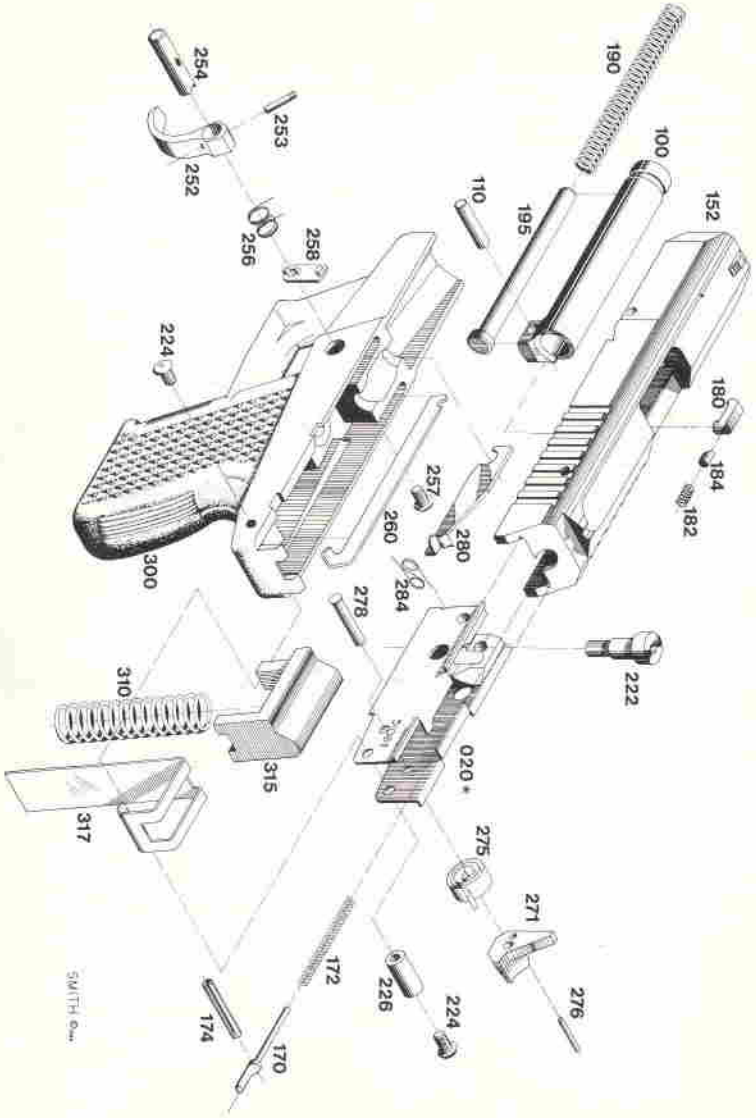
The trigger with a lever connects via a bar/disconnector to the hammer. The hammer is driven by a novel powerspring. Virtually the whole mass of the hammer is centered around it's axis. The light weight firing pin transmits the energy of the hammer to ignite the primer.



PARTS LIST

P10-100	Barrel
P10-110	Barrel Pin
P10-152	Slide
P10-170	Firing Pin
P10-172	Firing Pin Spring
P10-174	Firing Pin Pin
P10-180	Extractor
P10-182	Extractor Spring
P10-184	Extractor Plunger
P10-190	Recoil Spring
P10-195	Recoil Spring Guide
P10-020*	Frame
P10-222	Frame Screw Middle
P10-224	Frame Screw Rear
P10-226	Frame Bar
P10-252	Trigger
P10-253	Trigger Pin
P10-254	Trigger Axis
P10-256	Trigger Spring
P10-257	Trigger Screw
P10-258	Trigger Lever
P10-260	Trigger Bar
P10-271	Hammer
P10-275	Hammer Spring
P10-276	Hammer Pin
P10-278	Hammer Axis
P10-280	Slide Stop
P10-284	Slide Stop Spring
P10-300	Grip
P10-310	Magazine Spring
P10-315	Magazine Follower
P10-317	Magazine Plate

*Factory exchange only



INTRODUCTION

The Grendel P-10 is a radically new type of semi-automatic pistol. The P-10 is especially suited for selfdefense or home protection by individuals with only limited training in the use of a hand gun.

Like a double-action revolver, the P-10 has no external safety. Also like a revolver, the P-10 uses no loose magazines, but has a high capacity magazine integrated in the grip.

The P-10 is designed and manufactured in the United States. Extensive research and development, especially in the fields of composite materials and ignition dynamics, have been incorporated into this firearm. Thanks to the advanced design and modern computerized machinery, the P-10 can be manufactured at a low cost without compromising quality in materials or workmanship.

DESCRIPTION

The P-10 is a semi-automatic pistol chambered for the .380 ACP cartridge and operated by blowback. The firing mechanism is double-action only, with a novel low inertia safety hammer system.

The magazine is loaded from top and holds 10 rounds. A speed loader is also available. The bottom of the grip is designed to accept an extension or our "MMH" target illumination system.

TECHNICAL SPECIFICATIONS

Ammunition	.380 Auto.
Weight unloaded	15 oz.
Length	5.3 in.
Barrel length	3.0 in.
Sight radius	4.5 in.
Capacity	11 rounds

SAFETY WARNINGS

READ CAREFULLY BEFORE USING YOUR FIREARM

Always treat every gun as if it were loaded.

Never accept or pick-up a firearm without checking the magazine, and the chamber to assure the weapon is empty. Do not trust the extractor to clear the chamber - look or feel!

Always make sure the muzzle is pointed in a safe direction at all times.

Never store a firearm with a cartridge in the chamber.

Never store firearms and ammunition together, keep them locked up and away from children or careless adults.

Never keep a loaded firearm in the home, car, boat, or R.V.

Never touch the trigger when working the slide.

Never alter any components of your firearm.

Never take medications, drugs or alcohol when handling firearms.

Always use only clean, dry, original factory ammunition

Never load or unload a firearm without assuring the muzzle is pointed in a safe direction.

Never load a firearm except immediatelly before shooting.

Never handle firearms without proper shooting glasses and ear protection.

Never place finger on trigger until ready to fire.

Never point a firearm at anything you do not intend to shoot

Make sure your "audience" is always 5 feet in back of you, not next to you when firing.

Never shoot at any water surface or any surface where a ricochet can occur.

Never shoot until you are sure of your backstop and what lies beyond it.

If the gun does not discharge after pulling trigger, do not change its direction for at least 30 seconds, you could be having a "hang fire".

If you do not understand how to operate any of our products or have any questions about their safe handling, please write us.

SAFE GUN HANDLING IS YOUR RESPONSIBILITY